

Docket No. DTR 112

PATENT

<sup>AMENDED</sup>

14. An apparatus as claimed in claim 7, said executing means including means

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for performing a correlation algorithm on the first sequence and the reference sequence, the output of said providing means including a correlation output.

Please amend claim 29 to read as follows:

<sup>AMENDED</sup>

29. An apparatus as claimed in claim 26, said means for correlating including at least two or more parallel channels for executing at least two or more correlation algorithms simultaneously, one correlation algorithm for each channel.

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Please amend claim 30 to read as follows:

<sup>AMENDED</sup>

30. An apparatus as claimed in claim 26, at least one of the first sequence and the reference sequence representing a molecule from the group comprising DNA, RNA, a nucleotide, and amino acid, and a protein.

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#### IN THE SPECIFICATION

For the typographical error on page 3, line 12, please change, the paragraph appearing at the bottom of page 2 through the top of page 3 to read as follows:

Referring now to FIG. 1, a block diagram of a system for implementing an electronic hybridization assay in accordance with the present invention will be discussed. In operation of hybridization system 100, a first molecule (MOLECULE A) 110 is provided to a sequencing machine (SEQUENCING MACHINE) 112. Sequencing machine 112 determines the sequence of the particular molecular components or residues, referred to generally as subunits, of first molecule 110. For example, first molecule 110 in one embodiment is an oligonucleotide molecule such as DNA or RNA that has a sequence determined by the linear order of its component bases. Such a DNA molecule may comprise, for example, three bases where the molecule is single stranded, or may

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